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研究论文

藤三七中一个新黄烷醇和抗HIV活性成分

顾琼[1,4], 马云保[1,3], 张雪梅[1,3], 王睿睿[2,4], 周俊[1,3], 郑永唐[2,3], 陈纪军[1,3]

1. 中国科学院昆明植物研究所植物化学与西部植物资源持续利用国家重点实验室, 昆明 650204;
2. 中国科学院昆明动物研究所动物模型与人类疾病机理重点实验室分子免疫药理学实验室, 昆明 650223;
3. 中国科学院西南基地抗病毒天然药物联合实验室, 昆明 650204;
4. 中国科学院研究生院, 北京 100039

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摘要 利用各种色谱(硅胶和凝胶)方法, 从藤三七[*Boussingaultia gracilis* Miers var. *pseudobaselloides* Bailey]的70%(体积分数)的乙醇提取物中分离得到2个黄烷醇类化合物(1, 2)和4个黄酮类化合物(3~6). 采用UV, IR, MS 和1D, 2D NMR方法, 分别鉴定出如下化合物: 7-羟基-5-甲氧基-8-甲基-6-甲酰基-3,4-黄烷二醇, 命名为藤三七醇A(1); 4,7-二羟基-5-甲氧基-8-甲基-6-甲酰基黄烷(2); 7-O-methylunonal(3); 5,7-二羟基-6,8-二甲基-2-苯基-4H-1-苯并吡喃-4-酮(4); Desmosflavone(5)和Demethoxymatteucinol(6). 其中化合物1是一个新的黄烷二醇化合物, 化合物2~6为首次从该植物中分离得到. 抗HIV-1活性筛选结果表明: 化合物1, 2, 5, 6对HIV-1诱导合胞体的形成具有一定的抑制作用, 其半数有效浓度(EC_{50})分别为45.09, 48.73, 55.47 和 82.75 μmol/L, 治疗指数(TI)分别为1.41, 1.20, 7.15 和>8.51.

关键词 藤三七 藤三七醇A 黄烷醇 抗HIV活性

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One New Flavanoid and Anti-HIV Active Constituents from *Boussingaultia gracilis* Miers var. *pseudobaselloides* Bailey

GU Qiong[1,4], MA Yun-Bao[1,3], ZHANG Xue-Mei[1,3], WANG Rui-Rui[2,4], ZHOU Jun[1,3], ZHENG Yong-Tang[2,3], CHEN Ji-Jun[1,3]*

1. State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650204, China;
2. Laboratory of Molecular Immunopharmacology, Key Laboratory of Animal Models and Human Diseases Mechanisms, Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming 650223, China;
3. The Joint-Laboratory of Antiviral Natural Medicines, Kunming Branch, Chinese Academy of Sciences, Kunming 650204, China;
4. Graduate School of the Chinese Academy of Sciences, Beijing 100039, China

Abstract *Boussingaultia gracilis* Miers var. *pseudobaselloides* Bailey(Basellaceae) is a folk medicine used as an analgesic and supplements, only a few research was reported on the chemical constituents of this plant. This paper presented its chemical and anti-HIV active constituents. By column chromatography(Silica and Sephadex LH-20 gel) methods, two flavanols and four flavones were isolated from the 70%(volume fraction) ethanol extract. Based on extensive spect

ral analysis(UV, IR, MS and 1D, 2D NMR), compounds 1—6 were identified as bougracol A(1), 4,7-dihydroxy-5-methoxy-8-methyl-6-formyl-flavane(2), 7-O-methylunonal(3), 5,7-dihydroxy-6,8-dimethyl-2-phenyl-4H-1-benzopyran-4-one(4), desmosflavone(5) and demethoxymatteucinol(6). Among them, compound 1, a new flavan-diols, was deduced to be 7-hydroxy-5-methoxy-8-methyl-6-formyl-flavan-3,4-diols, and compounds 2—6 were firstly obtained from this plant. Anti-HIV assay suggests that compounds 1, 2, 5, 6 showed weak anti-HIV activities with EC_{50} values of 45.09, 48.73, 55.47 and 82.75 μmol/L, and TI values of 1.41, 1.20, 7.15 and > 8.51, respectively.

Key words *Boussingaultia gracilis* Miers var. *pseudobaselloides* Bailey Boussingol A Flavanoid Anti-HIV activity

DOI:

通讯作者 陈纪军 chenjj@mail.kib.ac.cn